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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,584	09/30/2003	Melissa Ann Clark	030627/267409	9953
826 7590 12/26/2008 ALSTON & BIRD LLP BANK OF AMERICA PLAZA 101 SOUTH TRYON STREET, SUITE 4000 CHARLOTTE, NC 28280-4000			EXAMINER FELTON, MICHAEL J	
			ART UNIT	PAPER NUMBER
			1791	
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			12/26/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/675,584

**Applicant(s)**

CLARK ET AL.

**Examiner**

MICHAEL J. FELTON

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**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3,4,8,9,12-14,20,21,24-27 and 33-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3,4,8,9,12-14,20-21,24-27 and 33-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claim 3, 4, 8, 9, 12-14, 20, 21, 24-27, and 33-45 have been considered but are moot in view of the new ground(s) of rejection.
2. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Keith II et al. clearly indicate the shortcomings of cellulose acetate filter sections and provide one solution, that of a filled cavity. Other solutions available, such as that of Irby Jr. et al., which is a capsule in a filter segment. The examiner believes that it is obvious to, and would be well within the skill of one of ordinary skill in the art, to use known filter segments together. For example, combining the filter segments of Keith II et al. and Irby Jr. et al. would result in a plug-space-plug filter with one of the plugs replaced with the plug and capsule design of Irby Jr. et al. The applicant alleges that the only way to combine the references would be to have the capsule of Irby Jr. et al. wetting the materials in the cavity of Keith II et al. This is not the case. There could also be adsorbents located in the filter segment in which the capsule is located as taught by Irby

Jr. et al. thereby allowing the invention of Irby Jr et al. to be easily "plugged into" the invention of Keith II et al.

3. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the present invention is to avoid mixing the liquid from the capsule with the adsorbent material) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

4. The applicant alleges that a reference of record teaches away from the combination of Keith and Schneider. Because this reference is not relied upon, it is immaterial to the current rejection. In addition, the reference does not appear to teach away because there appears to be no indication that the combination of references as used in the rejection would not work. In addition, the applicant suggests that because Schneider does not disclose the use of an adsorbent, that the reference is not applicable. This is not the case as the reasons for combining do not require Schneider to include a adsorbent section, as this section is taught by Keith II et al.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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6. Claims 3, 4, 8, 9, 12-14, 20, 21, 24-27, and 33-45 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The negative limitations in the amended claim ("wherein the first section of filter material is free of adsorbent material" and "wherein the capsule is free of adsorbent material" are not expressly disclose in the specification. The applicant indicates that support can be found on page 21 of the specification. However, there appears to be only direction to "minimal interaction" between an adsorbent that is located upstream from the flavor. There is no direction that adsorbents cannot be located within the first section of filter material or within the capsule.

***Claim Rejections - 35 USC § 103***

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 27, 3, 4, 8, 9, 13, 14, 20, 21, 24-26, 34-41, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keith II et al. (US 3,251,365) in view of Smith et al. (US 5,724,997) and Irby Jr. et al. (US 3,390,686).
2. Regarding claims 27, 3, Keith II et al., disclose that cellulose acetate filters do not removal all the harmful constituents of tobacco smoke (col. 2, 15-17). One solution disclosed is to use "well-known absorbents such as activated charcoal, alumina, natural and synthetic clays and silica gel" (col. 2, 23-30), and that these materials can be segregated from the cellulose acetate filter (col. 2, 70-72; col. 3, 1-5).. Keith II et al. also disclose a structure using two conventional filter plugs and forming a cavity between them, and the filter plugs can be made from plasticized cellulose acetate (col. 4, 7-39). However, Keith II et al. do not teach a compartment within the first section of filter material, a breakable capsule within the compartment, or a first filter section with outer and inner annular components.
3. Smith et al. teach a disposable flavor carrying filter that can be removably attached to the end of an existing cigarette, such as the cigarette disclosed by Keith II et al. Smith teaches several embodiments including the inclusion of a frangible capsule in a single fiber tow filter segment (in what would be the first segment, as shown in figure 2) or the capsule in a segment separated from the mouth end by another filter segment. However, Smith et al. do not teach a filter structured in separate longitudinally extending central portion and outer portions.

4. However, Irby Jr. et al. disclose the incorporation of a breakable capsule within a filter section, including a filter section comprising an outer annular filter material surrounding a cavity and inner filter material (figure 2; col. 4, 1-17). The outer material is formed to create a cavity in which the capsule and inner material is located.
5. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the add on filter containing a capsule of Smith et al. with the cigarette and filter structure disclosed by Keith II et al. to obtain filtered, flavored cigarette smoke. In addition, it would have been obvious to one of ordinary skill in the art at the time of invention that the filter segment structure disclose by Irby Jr. et al. could be used to form the capsule segment disclosed by Smith et al. By making the filter segment according to Irby Jr. et al., the capsule would cause the foam cylinder (the outer longitudinal portion, figure 2, element 12; col. 4, 1-29) would swell and fill the cavity left by the ruptured capsule as taught by Irby Jr. et al. In addition, the use of Smith et al. would separate the flavor from the adsorbent of the integral cigarette filter.
6. Regarding claims 3, 4, 33, Keith II et al. discloses the use of plasticized cellulose acetate tow with a denier per filament between 1.5 and 25, and with a total denier between 30,000 and 90,000. Although Irby Jr. et al. disclose using foam in the annular first filter, it would have been obvious to one of ordinary skill in the art at the time of invention to have tried the more commonly used cellulose acetate tow.
7. Particle sizes are also disclosed as being between 8 and 50 mesh
8. Regarding claim 20, Irby Jr. et al. show a generally spherical shaped capsule in figure 2.

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9. Regarding claim 21, Irby Jr. et al. disclose a capsule with a gelatin shell, a flavorant, and a diluting agent (water) (col. 3, 18-61).
10. Regarding claims 24 and 25, Irby Jr. et al. disclose a capsule up to 0.12 inches (just over 3 mm), falling within the range of at least 3 mm, and less than 5 mm. (col. 3, 18-61).
11. Regarding claims 26, 34-39, Irby Jr. et al. indicate that flavors, metal salts and activated charcoal (for altering smoke composition), and medicines can be added to the capsule. Lemon oil is one such flavor. (col. 3, 18-61). The examiner considers breath fresheners to be a subset of either medicines or flavors, and this would be obvious to one of ordinary skill. In addition, menthol, which is known as a breath freshener, is the most well known flavor added to cigarettes and, therefore, its use as a flavor would have been notoriously well known.
12. Regarding claims 13, 14, 36, and 37 Keith II, et al., disclose activated carbon with a particle size of between 8 and 50 mesh (col. 5, 2-10), and adding between 85-100 mg of particles (col. 6, 30-55).
13. Regarding claims 8 and 9, Keith II et al. disclose a filter assembly with a length of 20 mm, comprising two 7.5 mm cellulose acetate tow filter sections and a 5 mm absorbent filled cavity. Smith et al. teach an add on flavor segment that is 22 to 28 mm in length (col. 4, 7-21). Therefore the combination of Keith II et al. and Smith et al. is a filter 42 to 48 mm in length.
14. Regarding claim 40, Irby Jr. et al. dose not disclose what percentage of the capsule's contents are flavoring. However, it would have been obvious to one of



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ordinary skill in the art to vary the amount of flavoring depending on the flavoring's potency and the desired design effect on the smoker.

15. Regarding claim 41, replacing one of the filter segments of Keith II et al. with the filter segment of Irby Jr. et al. would inherently change the particulate removal efficiency of the first versus the second filter segment.

16. Regarding claim 45, Irby Jr. et al. disclose using crimped paper along with capsules (col. 4, 1-20).

17. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keith II et al. (US 3,251,365) and Irby Jr. et al. (US 3,390,686) as applied to claims 27 and 37 above, in further view of Frund (US 5,714,126). Keith II et al. and Irby Jr. et al. do not disclose the activity of the activated carbon. However, Frund discloses using activated carbon to remove harmful gasses, with an activity of at least 95 Carbon Tetrachloride Activity (col. 2, line 6). It would have been obvious to one of ordinary skill in the art at the time of invention to have used carbon with sufficient activity, as disclosed by Frund, to achieve removal of harmful gasses in the cigarette smoke.

18. Claims 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keith II et al. (US 3,251,365), Smith et al. (US 5,724,997), and Irby Jr. et al. (US 3,390,686) as applied to claims 27 and 9 above, in further view of Schneider (US 5,979,459).

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19. Although the combination of Keith II et al. and Irby Jr. et al. would product filter segments with different particulate removal efficiency, Schneider discloses a first filter segment made of cellulose acetate with a denier per filament of 2.1 or less (col. 2, 39-44) and a second filter segment made of cellulose acetate tow with a denier per filament of 8 with a resistance to draw of less than 20mm of water column (col. 2, 45-49).

Another embodiment is shown in figure 2, with a first filter plug (26) with a denier per filament of 2.1 adjacent to the tobacco, followed by a coaxial filter segment, also made of cellulose acetate tow, with a minimum denier pre filament of 3 (example 2). In each case, Schneider clearly shows the use of a first filter material with lower weight per unit length (lower denier per fiber, between 1.8 and 2.5 denier per fiber) than the second filter material (between 3.0 and 10 denier per fiber).

20. It would have been obvious to one of ordinary skill in the art at the time of invention to use the different filter segments described by Schneider in the filter of Keith II et al. and Irby Jr. et al. because Schneider teaches using segments with different fiber deniers to optimize ventilation and air flow within the filter. One of ordinary skill would have known this to be applicable to any cigarette filter assembly.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL J. FELTON whose telephone number is (571)272-4805. The examiner can normally be reached on Monday to Friday, 7:30 AM to 4:30 PM EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Phillip C. Tucker can be reached on 571-272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. J. F./  
Examiner, Art Unit 1791

/Philip C Tucker/  
Supervisory Patent Examiner, Art Unit 1791